UNCLASSIFIED   PROCESSING DATE--23OCT7(

CIRC ACCESSION NO--AP0119644
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHENOL (AFTER DISTN. AND DRYING)
WAS PURIFIED BY CONTACT WITH THE KU 2 RESIN (ACTIVATED BY CONTACT WITH
10PERCENT HCL, AND DRIED), AT 75-100DEGREES AND FLOW RATE 1 VOL.-HR TO
QUANT. REMOVE MESITYL OXIDE, ALPHA METHYLSTYRENE, AND ME SUB2 PHCOH
(INITIAL CONCNS. WERE 0.083, 0.0045, AND 0.063 WT. PERCENT, RESP.),
WHILE THE CONCN. OF BZME REMAINED CONST. (0.9 WT. PERCENT).
PURIFICATION BY CONTACT WITH AN ALUMINOSILICATE CATALYST WAS LESS
EFFECTIVE.

UNCLASSIFIED

TITLE--CATALYTIC PURIFICATION OF PHENOL -U-

AUTHOR-(05)-MENYAYLO, A.T., POKROVSKAYA, I.YE., AEROV, M.E., GUROVICH,
   R.E., VOLKOYA, T.S.
COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(2), 92-4

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHENOL, CHEMICAL PURIFICATION, ION EXCHANGE RESIN/(U)KU2 ION
   EXCHANGE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0737   STEP NO--UR/0064/70/046/002/0092/0094

CIRC ACCESSION NO--AP0119644
                         UNCLASSIFIED

2/2   041   UNCLASSIFIED   PROCESSING DATE--20NOV70

CIRC ACCESSICN NO--AT0133554

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FROM STUDIES OF THE STATIC HEAD OF
LIQ. (WATER) AT VARIOUS POINTS ABOVE A 8-MM THICK, 200-MM DIAM.
PERFORATED PLATE WITH 31 HOLES OF 3-MM DIAM. AND AT AIR VELOCITIES OF
30-400 M-SEC. THROUGH THE ORIFICES, THE FOLLOWING EQUATION WAS DEVELOPED
FOR THE COEFF. K, CHARACTERIZING THE DECREASE IN MEASURABLE STATIC HEAD
COMPARED TO THE ACTUAL HEAD: GAMMA SUBL (BAR H MINUS BAR H) EQUALS K
(GAMMA SUBG W SUBO PRIME2-2G). WHERE GAMMA AND GAMMA SUBG ARE THE DS. OF
LIQ. AND GAS, BAR H AND BAR H ARE THE EFFECTIVE AND AV. MEASURED STATIC
LIQ. HEADS, AND W SUBO IS THE GAS VELOCITY. THE EXPT. VALUES OF K FOR
THIS STUDY WAS 0.0167 WHICH COMPARES WELL WITH A CALCD. VALUE OF 0.014,
AND WITH OTHER DATA IN THE LITERATURE.   FACILITY: MOSK. INST.
KHIM. MASHINOSTR., MOSCOW, USSR.

UNCLASSIFIED

1/2   041   UNCLASSIFIED   PROCESSING DATE--20NOV70

TITLE--HYDRAULIC PRINCIPLES OF BUBBLING -U-

AUTHOR-(05)-POZIN, L.S., TYLES, V.G., AKSELROD, L.S., AEROV, M.E.,
  BYSTROVA, T.A.

COUNTRY OF INFO--USSR

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PRESSURE GRADIENT, PRESSURE MEASUREMENT, GAS FLOW, STATIC
  PRESSURE, WATER, TWO PHASE FLOW

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1649   STEP NO--UR/0153/70/013/002/0271/0276

CIRC ACCESSION NO--AT0133554
                        UNCLASSIFIED

USSR

AERO, E. L., Prikladnaya Matematika i Mekhanika, No 2, 1972, pp 282-290

contribution of the moment terms to the total energy balance of the processes
of deformation and flow. However, an entire series of fine particularities
of the viscoelastic behavior of such media cannot be interpreted without
taking moment interactions into account. In an analysis of the simplifica-
tions introduced into asymptotic mechanics when dealing with weak-moment
media, consideration is given to elastic isotropic media characterized by
the supplementary coefficients of rotation elasticity gamma, and of moment
elasticity eta, tau, and theta. The energy contribution of the moment terms
to the elastic potential is determined by the ratio of these coefficients to
the moduli of classical elasticity lambda and mu. If these ratios are small,
the medium is called a weak-moment medium. The boundary-value problem of
the asymmetric theory of elasticity is analyzed for such media. 5 references.

2/2

- 65 -

USSR

AERO, E. L.

"A Boundary-Value Problem of the Asymmetric Theory of Elasticity in a Quasi-Classical Approximation"

Abstract: The article deals with a static boundary-value problem of the asymmetric theory of elasticity for media in which the moment effects contribute little to the elastic energy. The coefficient of elasticity in equilibrium equations, having the dimension of the square of the length, are assumed small in comparison to the squares of the characteristic dimensions of the body. A solution of the equilibrium equations is obtained, which contains small parameters for the leading derivitives. The method of approximations is used to construct a solution for the field of displacements and rotations in the form of the sum of their classical limits and moment terms, which have the form of boundary-layer functions. Consideration is given to boundary conditions of the kinematic type, and a system for satisfying them by the method of successive approximations is developed.

Numerous media, the viscoelastic behavior of which is described within the framework of asymmetric continuous mechanics, is characterized by small

1/2

AERO, E.L.

USSR

UDC 577.3

AVAKYAN, Ts. M., ADZHYAN, N. S., and STEPANYAN, L. G., Laboratory of Radiation Biophysics of the State Committee for Use of Atomic Energy, Yerevan Physics Institute

"Abnormal Luminescence of Cells Induced by X-Rays in an Atmosphere of Oxygen at High Pressure"

Abstract: Chemiluminescence of 4- to 5-day-old x-ray irradiated (500 r to 5 kr) pea roots was studied after exposure to nitrogen, oxygen, and the antioxides cysteine and cystophos (monosodium β-aminothiophosphate, $M=179.11$). At a pressure of 0.2 atm of nitrogen, the level of luminescence dropped sharply and remained low even after further increases in nitrogen pressure. At pressures of 0.2 to 9 atm of oxygen, the level of luminescence increased, oxygen participated vigorously in the reaction, and the process of oxidation intensified. However, the rate of the reaction slowed when oxygen pressure was increased. Cysteine and cystophos are known to inhibit chemiluminescence sharply and decrease its intensity. But after the pea roots were treated with these agents, chemiluminescence increased after exposure to 2 kr + O_2 and the intensity of chemiluminescence slowly increased after a pressure of 9 atm. 1/1

- 32 -

CIRC ACCESSION NO--AP0108944

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KIDNEY CELL CULTURES FROM ONE DAY
OLD GREEN MONKEY WERE INFECTED WITH ADENOVIRUS TYPE 12. AFTER THE
APPEARANCE OF ADENOVIRUS CYTOPATHIC EFFECT IN THE MAJORITY OF CULTURES
IN WHICH REGULAR CHANGES OF THE NUTRIENT MEDIUM WERE CARRIED OUT FOR A
LONG TIME WITH PRESERVATION OF 50PERCENT OF THE OLD CULTURE FLUID, AT
30-40 DAYS GROWING OUT CELL ELEMENTS BEGAN TO APPEAR. SUBSEQUENTLY FROM
THEM DIFFERENT LINES OF CONTINUOUS CULTURES WERE DERIVED DIFFERING IN
MORPHOLOGICAL AND OTHER PROPERTIES. THIS PHENOMENON OF REPOPULATION OF
CELLS SURVIVING AFTER ADENOVIRUS CYTOPATHIC EFFECT WAS REGULARLY
REPRODUCED IN DIFFERENT EXPERIMENTS. SOME CELLS OF THE CULTURE
CONTAINED PERSISTING ADENOVIRUS TYPE 12 WHICH WAS DEMONSTRATED BY
PDODUCTION OF SPECIFIC CYTOPATHIC EFFECT IN HELA CELLS INOCULATED WITH
THESE CELLS AND BY PRODUCTION OF TUMORS IN NEWBORN HAMSTERS INOCULATED
WITH THESE CULTURES. MORPHOLOGY OF THESE TUMORS WAS TYPICAL FOR
NEOPLASMS INDUCED BY ADENOVIRUS TYPE 12. SERA FROM ANIMALS BEARING
THESE TUMORS CONTAINED ANTIBODY REACTING WITH THE T,ANTIGEN OF HAMSTER
TUMOR INDUCED BY ADENOVIRUS TYPE 12.

1/2   022   UNCLASSIFIED   PROCESSING DATE--18SEP70
TITLE--TRANSFORMATION OF NEWBORN GREEN MONKEY KIDNEY CELL CULTURES INDUCED
   BY ADENOVIRUS TYPE 12 -U-
AUTHOR-(02)-ADZHIGITOV, F.I., KRIVOSHEIN, YU.S.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 2, 221-225

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TISSUE CULTURE, ADENOVIRUS, MONKEY, CONTINUOUS CULTURE,
   ANTIGEN, TUMOR, ANTIBODY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/0738   STEP NO--UR/0402/70/000/002/0221/0225

CIRC ACCESSION NO--AP0108944
                        UNCLASSIFIED

A

USSR   UDC 576.858.5.093.35.095.5

ADZHIGITOV, F. I., and KRIVOSHEIN, Yu. S., Institute of Experimental Pathology
and Therapy, Academy of Medical Sciences, USSR, Sukhumi

"Transformation of Kidney Cell Cultures of Newborn Green Monkey Induced by
Adenovirus Type 12"

Abstract: Kidney cell cultures from one-day-old green monkeys were infected with
adenovirus type 1w. Thirty to forty days after the appearance of the adenovirus
cytopathic effect in the majority of cultures, growing cell elements began to
appear. Regular changes in the nutrient medium had been conducted for a long
time, preserving 50% of the old culture fluid. A different line of continuous
cultures was subsequently derived from the cell elements, differeing in morpho-
logical properties. This phenomenon of the repopulation of cells surviving after
adenovirus cytopathic effect was regularly reproduced in different experiments.
Some culture cells contained persistent adenovirus type 1w, which was demon-
strated by production of specific cytopathic effect in HeLa cells inoculated with
these cells, and by production of tumors in newborn hamsters inoculated with these
cultures. The morphology of these tumors was typical of neoplasms induced by
adenovirus type 12. Sera from animals bearing these tumors contained antibodies
reacting with the T-antigen of hamster tumor induced by adenovirus type 12.
1/1

INFLUENCE OF PLASTIC DEFORMATION ON THE RELAXATION OF STRESSES IN BERYLLIUM BRONZE

Beryllium bronze is finding broad application in instrument design for the manufacture of different types of springs and elastic elements [1]. Resistance to stress relaxation has great significance in the number of requirements imposed on spring products of beryllium bronze.

References [2, 3] investigated the phenomenon of anomalous relaxation of beryllium bronze, including the fact that stresses created by the external loading of a sample (by bending) are reduced to zero value and then grow with an inverse sign and subsequent ordinary relaxation of the already redistributed stress. The anomalous relaxation of stresses was observed only under test conditions when the alloy had a metastable structure (quenched or slightly aged).

In connection with the significant spread of the operation of cold plastic deformation after quenching for beryllium bronze it is of interest to investigate the influence of cold plastic deformation on the kinetics of stress relaxation. Earlier it was shown [4] that cold plastic deformation of quenched beryllium bronze to a significant deformation eliminates the anomalous kinetics of stress relaxation; however, no detailed investigation of this question has been conducted.

In particular it is of interest to study the influence of plastic deformation not only on the anomalous, but also on the ordinary, relaxation of stresses in conjunction with stress relaxation after quenching and aging.

-17-

ADZHI-ASAN, E. B.

INFLUENCE OF PLASTIC DEFORMATION ON THE RELAXATION OF STRESSES IN BERYLLIUM BRONZE

Beryllium bronze is finding broad application in in-
strument design for the manufacture of different types of
springs and elastic elements [1]. Resistance to stress re-
laxation has great significance in the number of require-
ments imposed on spring products of beryllium bronze.

References [2, 3] investigated the relaxation of stress
in the relaxation of beryllium bronze...

In particular it is of interest to study the influence
of plastic deformation not only on the anomalous, but also on
the ordinary relaxation of stresses in conjunction with
stress relaxation after quenching and aging.

-17-

USSR

UDC: 681.326.3

ADZHEMYAN, V. L., GASPARYAN, L. Kh., KHACHATRYAN, G. S., GEMERDZHYAN, M. A.

"A Microprogram Control Device"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,
No 9, Mar 72, Author's Certificate No 331387, Division G, filed 2 Sep 70,
published 7 Mar 72, p 152

Translation: This Author's Certificate introduces a microprogram control
device which contains a memory unit, registers, decoders, a cadence signal
generator, and logic elements. As a distinguishing feature of the patent,
the speed and structural flexibility of the device are increased by includ-
ing an additional digital place in each field of the information register
of the memory unit. The output of each of these digital places is connected
respectively to the input of the first AND circuit, through a NOT gate to
the input of the second AND circuit, and through the decoder for the given
field to the input of the third AND circuit. The second input of the third
AND circuit is connected to the output of a circuit for isolating even and
odd signals. The inputs of the first and second AND circuits are connected
through delay circuits for the given digital place to the reset and set
terminals of this additional digital place respectively.

1/1

- 4 -

2/2   028   UNCLASSIFIED   PROCESSING DATE--1?SEP70
CIRC ACCESSION NO--AP0106851
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IR SPECTRA SHOW THAT N SUB2 O,
  NO, N SUB2, AND H SUB2 O ARE THE MAIN PRODUCTS OF THE CATALYTIC OXIDN.
  OF NH SUB3 ON A 1:2 BI,MO CATALYST. 70PERCENT OF THE NH SUB3 IS
  CONVERTED TO N AND THE REMAINING PART IS OXIDIZED TO THE MENTIONED
  PRODUCTS. THE ACTIVATION ENERGY OF NH SUB3 OXIDN. IS 11 KCAL-MOLE AND
  THE OXIDN. IS A 1.5 ORDER REACTION WITH RESPECT TO NH SUB3 CONCN.

UNCLASSIFIED

TITLE--OXIDATION OF AMMONIA ON A BISMUTH MOLYBDENUM CATALYST -U-

AUTHOR--ALKHAZOV, T.G., ADZHAMOV, K.YU., LISOVSKIY, A.YE., BELENKIY, M.S.,
   PORTYANKSIY, A.YE.

COUNTRY OF INFO--USSR

SOURCE--KINET. KATAL. 1970, 11(1) 123-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CATALYTIC OXIDATION, AMMONIA, NITROGEN, ACTIVATION ENERGY,
   BISMUTH, MOLYBDENUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0195   STEP NO--UR/0195/70/011/001/0123/0129

CIRC ACCESSION NO--AP0106851
                              UNCLASSIFIED

ADYLOVA, Z., LUTFULLAYEV, R. A.

"Some Properties of the Measures of Importance of Characteristics"

Translation: The properties of the measure of importance of a characteristic 1 are studied, and its dependence on the characteristic itself and the properties of the table are estimated in order to support the selection of the parameters of a measure and interpret the results of experiments. Formulas are presented which consider the range of change of the measure. A simple formula is presented for calculation of the measure, allowing a significant reduction in machine time. Practical recommendations are presented.

1/1

USSR

ADYLOVA, F. T.

"Modeling of Integral Perception of a Visual Object by Computer"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 53, Tashkent, 1972, pp 88-94 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V731, by the author).

Translation: Problems of development of a dictionary of forms are studied, i.e., separation of typical fragments of an image in the solution of problems of pattern recognition by a linguistic method. A set of standard programs for modeling of integral perception of a visual object is suggested and produced.

1/1   - 111 -

Cardiovascular Diseases

USSR

ADYLOV, A. K., Docent, and PUSHKAREVA, S. Ya., Staff Physician, Chair of Hospital
Therapy, Sumarkand Medical Institute

"Climatopathology of Acute Cardiovascular Diseases in Samarkand"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 6, Jun 70, pp 31-32

Abstract: Since the climate in Samarkand, located 724 meters above sea level, dif-
fers considerably from the climate prevailing in other Central Asian cities, the
possibility of a correlation between climate and cardiovascular diseases was studied.
The data used for analyses covered a period of six years (1958-1963) during which
exact meteorological parameters and the following cardiovascular diseases were re-
corded: 2,785 cases of stenocardia, 627 cases of hypertensive insults, 345 cases of
myocardial infarction, and 247 cases of hypertensive crisis. The results proved
that there is a definite correlation between an increased frequency of cardiovascu-
lar diseases and pronounced climatic fluctuations, such as rapid changes in atmos-
pheric pressure, temperature, and humidity. Even though data are not very detailed,
they are useful for establishing medical forecasts and organizing prophylactic
measures.

1/1

CIRC ACCESSION NO--AP0134902

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT.
  3,(3,CHLORO,2,HYDROXYPROPYL)BENZOTHIAZOLE,2,THIONE (I) AND
  2,(2,3,EPOXYPROPYLTHIO)BENZOTHIAZOLE (II) WERE PREPE. FROM
  2,MERCAPTOBENZOTHIAZOLE (CAPTAX) (III) AND EPICHLOROHYDRIN. A REACTION
  MECHANISM IS PROPOSED. CELLULOSE (IV) WAS MODIFIED WITH I, II, AND A
  1:1 III,OCN(CH SUB2) SUB6 NCO ADDUCT AT 150DEGREES TO GIVE S AND N
  CONTG. PRODUCTS. SPECTRAL DATA SHOWED THAT THE MODIFYING AGENTS WERE
  CHEM. BOUND TO IV.   FACILITY: NAUCH.-ISSLED. INST. KHIM.
  TEKHNOL. KHLOP. TSELLYUL., TASHKENT, USSR.

UNCLASSIFIED

TITLE--SYNTHESIS AND INFRARED SPECTROSCOPIC STUDIES OF CELLULOSE MODIFIED
   WITH 2,MERCAPTOBENZOTHIAZOLE DERIVATIVES -U-

AUTHOR-(05)-GRIGORYAN, G.L., TULYAGANOV, M.M., GAFUROV, T.G., ADYLOV, A.,
   TASHPULATOV, YU.T.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(4), 753-60

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, IR SPECTRUM, SPECTROSCOPIC ANALYSIS,
   CELLULOSE, MERCAPTAN, BENZENE DERIVATIVE, EPICHLOROHYDRIN, CHEMICAL
   REACTION MECHANISM, CHEMICAL BONDING, THIAZOLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1228   STEP NO--UR/0459/70/012/004/0753/0760

CIRC ACCESSION NO--AP0134902
                            UNCLASSIFIED

Acc. Nr;
AP0047501 — Abstracting Service: Ref. Code:
                NUCLEAR SCI, ABST. 4-70   UR0089

A

14018   SEPARATION AND PURIFICATION OF GALLIUM
ISOTOPES BY EXTRACTION-CHROMATOGRAPHIC TECHNIQUE
AFTER ELECTROMAGNETIC SEPARATION. Ad'yasevich, I. K.;
Bel'skaya, E. P. At. Energ. (USSR); 28; 64-5(Jan 1970). (In
Russian).

  The extraction–chromatography method was used for the sepa-
ration and purification of Ga from Fe and Cu impurities. The re-
sults showed that this method with ion exchange resulted in gallium
oxide with 0.001% Cu and 0.01% Fe. The extraction method de-
scribed can be used in the electromagnetic method for isotope
separation. (R.V.J.)

REEL/FRAME
19791060

USSR

KAMILOV, M. M., ADYLOVA, Z. T.

"Successive Reduction in the Number of Characteristics of Objects in the Solution of One Applied Problem"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 50, Tashkent, 1972, pp 65-67 (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 V855).

Translation: The problem of compression of the characteristics of a space based on a certain successive procedure of exclusion of characteristics with analysis of the quality of recognition at each iteration is solved.

1/1

USSR

ADYLOVA, F. T.

"Construction of a Description of Classes of Objects in Prediction Problems"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 51,
Tashkent, 1972, pp 82-87 (Translated from Referativnyy Zhurnal Kibernetika,
No 4, 1973, Abstract No 4V709, by the author).

Translation: The problem of description of a dynamic object is solved as a
problem of pattern recognition. A method of construction of descriptions of
classes using characteristics which are stable for a certain group of classes
is indicated. The method has been tested on 10 classes of objects.

1/1

CIRC ACCESSION NO--AP0124659

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE VECTOR PRIMEA SUB2 (90DEGREES)
AND TENSORS P PRIMEA SUB33 (90DEGREES) AND P PRIMEA SUB11 (90DEGREES)
MINUS P PRIMEA SUB22 (90DEGREES) OF THE REACTION D(D,P) PRIME3 H (A
POLARIZED D BEAM) WERE MEASURED IN THE ENERGY REGION 60-150 KEV AS WELL
AS THE LEFT RIGHT ASYMMETRY EPSILON(90DEGREES) OF THIS REACTION IN THE
REGION 60-505 KEV. THE DETD. VALUES HAVE NO RESONANCE SINGULARITIES
WHICH WERE PREVIOUSLY OBSD. PARTICULARLY NEAR 105 KEV.   FAICLITY:
INST. AT. ENERG. IM. KURCHATOVA, MOSCOW, USSR.

TITLE--RESONANCE OF D,D,P, PRIME3 T REACTION AT LOW ENERGIES -U-

AUTHOR-(03)-ACYASEVICH, B.P., ANTONENKO, V.G., FOMENKO, D.YE.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(4), 732-5

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--DEUTERIUM, DEUTERON BOMBARDMENT, TRITIUM, RESONANCE ABSORPTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1000   STEP NO--UR/0367/70/011/004/0732/0735

CIRC ACCESSION NO--AP0124659

USSR   UDC 576.856.72.095.6+576.856.72.097.2.083.3

ADUYEVA, T. P., CHERNUKHA, Yu. G., and KARIMOVA, Z. Kh., Institute of
Epidemiology and Microbiology imeni Gamaleya, Academy of Medical
Sciences USSR

"Multiplication and Antigenic Activity of Leptospirae in Various Nutrient
Media"

Abstract: Eighteen strains of Leptospirae belonging to 14 different serologi-
cal groups (parasitic and saprophytic) were grown in six different media:
Fervoort-Vol'f, Kortgof, Lyubashenko, GNKI (State Control Institute of Veter-
inary Preparations), and Beisman's synthetic medium, to which bovine albumin
was added. Proliferation of cells was greatest in the synthetic medium with
bovine albumin. Rabbits were used for determination of the antigenic activity
of strain No 3705 and Pomona strain after 12 passages in the above media and
in Terskis' medium. The greatest rise in antibody concentration was induced
by strains grown in Terskis' medium. It is concluded that sera are still the
best media for storing Leptospirae.
1/1

USSR

and the collapse time of the soil into the cavity were measured.

    Comparison of these results with the results of actual explosions demon-strated that the relations obtained in the model experiments must be considered as the limiting estimate of the mechanical effect (the sink dimensions and the ejection or collapse parameters of the soil) for explosions in weakly-bound soil or on a sufficiently large scale when the properties of the fractured wave of soil are in accordance with the model conditions. The specific nature of the procedure did not allow studies of the scale of the explosion and the type of medium for which settling of the surface takes place. The effect of the physical-mechanical properties of the collapsed soil was not studied. Apparently the soil properties can have a significant effect on the size of the collapse sink and the breakthrough time for the gas and the collapse time of the soil.

2/2

- 75 -

USSR

ADUSHKIN, V. V., PERNIK, L. M., Moscow

"Characteristic Featuresoof Collapse Sinking"

Abstract: A study was made of the general laws of the collapse sinking process. The simulation method [M. A. Sadovskiy, et al., Dokl. AN SSSR, 167, 6, 1966] was used to investigate the nature of the movement of the ground, and the dimensions of the sinks were found in the charge depth range between the ejection explosions and the limiting depth of setting the charge. The critical values of the explosion parameters were determined (the depth of setting the charge, the radius and energy of the gas in the cavity) for which transition from an ejection sink to a collapse sink takes place. In this range the movement of the ground has a complex nature: part of the ground near the cavity caves in and the cavity "floats up," and the soil located near the free surface is ejected. The transformation of the form of the sink is traced. In some cases the sink radius is characterized by two values on the initial level of the ground surface. Relations were obtained for the height of the mushroom and the dimensions of the sinks (radius, depth and volume) as functions of the gas energy in the cavity and the ratio of the depth of laying the charge to the cavity radius. The breakthrough time for the gas from the cavity into the atmosphere

1/2

USSR

ADUSHKIN, L. YE., et al., Izvestiya Akademii Nauk SSSR -- Neorgani-
cheskiye Materialy, Vol 6, No 4, Apr 70, pp 753-766

It was found that the strength of porous ceramics (as compared
with dense ceramics) is reduced as a result of reduced contact
strength, a decrease in the contact cross-section and the stress con-
centration of the pores. The deformation rate of porous corundum
ceramics of granular structure does not depend on the pore size and is
~1-2 orders of magnitude higher than the deformation rate for dense
corundum ceramics with corresponding crystal size. In the tempera-
ture range under study deformation is determined by the same mechan-
isms as the deformation of dense materials. The increase observed in
the deformation rate is due to an increase in the effective stress
which occurs in the material as a result of a decrease in the cross-
section and stress concentration. The effect of porosity and pore
size on the deformation rate may be considered in the first approxima-
tion from the value of the "limiting proportion of the contact cross-
section."

2/2

USSR

A

UDC: ~~~~~~~~~~~

~~~~~~~~~~~~, ~~~~~~, V.~., ~~~~~~, I.YA., and ~~~~~~~~~~~~~~, ~~~~~~~~~~~
Institute of Chemical ~~~~~~~~ imeni D.I. ~~~~~~~~~~, ~~~~~~~~~~~~~~~~~~~
and Secondary Specialized Education RSFSR

"Strength and Deformation of Oxide Ceramics"

Abstract: The article considers the effect of grain composition (size of filler grains and the pore size determined by them) on the strength and high-temperature deformation of corundum ceramics. The initial material was commercial G-1 brand alumina. A filler (single-fraction Al_2O_3 powder) and binder (finely dispersed Al_2O_3 precalcined at 1450° C) were used to prepare specimens with different structures (textures). The filler grain size varied from 50 to 1000 microns. The experimental specimens prepared were of practically identical phase composition, microstructure and porosity (32 percent) and differed only in texture, i. e. the number and size of the pores with an identical pore size distribution character.

1/2

2/2   029   UNCLASSIFIED   PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0130380
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRENGTH AND DEFORMATION OF
   MODEL STRUCTURES OF POROUS CORUNDUM CERAMICS OF A GRANULAR CONSTRUCTION
   WERE INVESTIGATED.   AT CONST. COMPN., MICROSTRUCTURE, AND APPARENT D.,
   THE TEST SAMPLES DIFFERED ONLY IN TEXTURE (THE GRAIN SIZE OF THE
   POLYCRYST. FILLER AND THE PORE SIZE DETD. BY IT).   THE STRENGTH OF
   POROUS CERAMIC (AS COMPARED TO THE DENSE ONE) IS DECREASED DUE TO THE
   LOWER CONTACT STRENGTH, DECREASED CONTACT CROSS SECTION, AND DECREASED
   STRESS CONCN. IN THE PORES. THE DEFORMATION RATE OF POROUS CORUNDUM
   CERAMICS OF GRANULAR CONSTRUCTION DOES NOT DEPEND ON THE PORE SIZE AND
   IS SIMILAR TO 1-2 AS GREAT AS THE DEFORMATION RATE OF CORUNDUM CERAMICS.
   AT 1350-1600DEGREES THE DEFORMATIOOF THE STRUCTURE IS DETD. BY THE VERY
   SAME MECHANICSMS AS THE DEFORMATION OF DENSE MATERIALS. THE OBSD.
   INCREASE IN THE DEFORMATION RATE IS ASSOCD. WITH THE INCREASE IN THE
   EFFECTIVE STRESSES ARISING IN THE MATERIAL AS A RESULT OF THE WEAKENING
   OF THE CROSS SECTION AND THE STRESS CONCNS. THE SUMMARY ACTION OF THE
   FACTORS INDICATED CAN IN THE 1ST APPROXN. BE CONSIDERED EMPIRICALLY FROM
   THE VALUE OF THE "LIMITING FRACTION OF THE CONTACT CROSS SECTION".
      FACILITY: MOSK. KHIM.-TEKHMOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

ADYLOVA, F. T.

"Construction of a Description of Classes of Objects in Prediction Problems"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 51, Tashkent, 1972, pp 82-87 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V709, by the author).

Translation: The problem of description of a dynamic object is solved as a problem of pattern recognition. A method of construction of descriptions of classes using characteristics which are stable for a certain group of classes is indicated. The method has been tested on 10 classes of objects.

1/1

CIRC ACCESSION NO--AP0124659

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE VECTOR PRIMEA SUB2 (90DEGREES)
AND TENSORS P PRIMEA SUB33 (90DEGREES) AND P PRIMEA SUB11 (90DEGREES)
MINUS P PRIMEA SUB22 (90DEGREES) OF THE REACTION D(D,P) PRIME3 H (A
POLARIZED D BEAM) WERE MEASURED IN THE ENERGY REGION 60-150 KEV AS WELL
AS THE LEFT RIGHT ASYMMETRY EPSILON(90DEGREES) OF THIS REACTION IN THE
REGION 60-505 KEV. THE DETD. VALUES HAVE NO RESONANCE SINGULARITIES
WHICH WERE PREVIOUSLY OBSD. PARTICULARLY NEAR 105 KEV.   FAICLITY:
INST. AT. ENERG. IM. KURCHATOVA, MOSCOW, USSR.

UNCLASSIFIED

TITLE--RESONANCE OF D,D,P, PRIME3 T REACTION AT LOW ENERGIES -U-

AUTHOR-(03)-ACYASEVICH, B.P., ANTONENKO, V.G., FOMENKO, D.YE.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(4), 732-5

DATE PUBLISHED------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--DEUTERIUM, DEUTERON BOMBARDMENT, TRITIUM, RESONANCE ABSORPTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1000   STEP NO--UR/0367/70/011/004/0732/0735

CIRC ACCESSION NO--AP0124659
                        UNCLASSIFIED

USSR   UDC 576.856.72.095.6+576.856.72.097.2.083.3

ADUYEVA, T. P., CHERNUKHA, Yu. G., and KARIMOVA, Z. Kh., Institute of
Epidemiology and Microbiology imeni Gamaleya, Academy of Medical
Sciences USSR

"Multiplication and Antigenic Activity of Leptospirae in Various Nutrient
Media"

Abstract: Eighteen strains of Leptospirae belonging to 14 different serologi-
cal groups (parasitic and saprophytic) were grown in six different media:
Fervoort-Vol'f, Kortgof, Lyubashenko, GNKI (State Control Institute of Veter-
inary Preparations), and Beisman's synthetic medium, to which bovine albumin
was added. Proliferation of cells was greatest in the synthetic medium with
bovine albumin. Rabbits were used for determination of the antigenic activity
of strain No 3705 and Pomona strain after 12 passages in the above media and
in Terskis' medium. The greatest rise in antibody concentration was induced
by strains grown in Terskis' medium. It is concluded that sera are still the
best media for storing Leptospirae.
1/1

ILLEGIBLE

UDC 550.348.425+624

USSR

ADUSHKIN, V. V.,

"Characteristic Features of ... collapse sinking process.

Novosibirsk, Fizika ... i vzryva, Vol 8, No 4, ..., AN SSSR, 107, 6, 1966]

Abstract: A study ... of the ground, and the di-
The simulation method ... the ejection
was used to investigate the nature ... range between the ejection
mensions of the sinks were found in ... The critical values
explosions and the limiting depth of setting ... setting the charge,
of the explosion parameters were determined (the depth ... transition from an
the radius and energy of the gas in the cavity) for which ... the movement of
ejection sink to a collapse sink takes place. In this range the cavity caves in
the ground has a complex nature: part of the ground near the cavity is ejected.
and the cavity "floats up," and the soil located near the free surface the sink
The transformation of the form of the sink is traced. In some cases the sink
radius is characterized by two values on the initial level of the ground sur-
face. Relations were obtained for the height of the mushroom and the dimen-
sions of the sinks (radius, depth and volume) as functions of the gas energy
in the cavity and the ratio of the depth of laying the charge to the cavity
radius. The breakthrough time for the gas from the cavity into the atmosphere
radius.

USSR

ADUSHKIN, L. YE., et al., Izvestiya Akademii Nauk SSSR -- Neorgani-
cheskiye Materialy, Vol 6, No 4, Apr 70, pp 753-760

It was found that the strength of porous ceramics (as compared
with dense ceramics) is reduced as a result of reduced contact
strength, a decrease in the contact cross-section and the stress con-
centration of the pores. The deformation rate of porous corundum
ceramics of granular structure does not depend on the pore size and is
~1-2 orders of magnitude higher than the deformation rate for dense
corundum ceramics with corresponding crystal size. In the tempera-
ture range under study deformation is determined by the same mechan-
isms as the deformation of dense materials. The increase observed in
the deformation rate is due to an increase in the effective stress
which occurs in the material as a result of a decrease in the cross-
section and stress concentration. The effect of porosity and pore
size on the deformation rate may be considered in the first approxima-
tion from the value of the "limiting proportion of the contact cross-
section."

2/2

- 25 -

USSR

UDC:

ADUSHKIN, L.IL., BARUNOV, V.A., GUNION, I.YA., and R...

Institute of Chemical Technology imeni D.I. Mendeleyev, Moscow,

and Secondary Specialized Education RSFSR

"Strength and Deformation of Oxide Ceramics"

Moscow, Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol 6, No 4, Apr 70, pp 753-760

Abstract: The article considers the effect of grain composition (size of filler grains and the pore size determined by them) on the strength and high-temperature deformation of corundum ceramics. The initial material was commercial G-1 brand alumina. A filler (single-fraction Al_2O_3 powder) and binder (finely dispersed Al_2O_3 precalcined at 1450° C) were used to prepare specimens with different structures (textures). The filler grain size varied from 50 to 1000 microns. The experimental specimens prepared were of practically identical phase composition, microstructure and porosity (32 percent) and differed only in texture, i. e. the number and size of the pores with an identical pore size distribution character.

1/2

CIRC ACCESSION NO--AP0130380

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRENGTH AND DEFORMATION OF
MODEL STRUCTURES OF POROUS CORUNDUM CERAMICS OF A GRANULAR CONSTRUCTION
WERE INVESTIGATED.   AT CONST. COMPN., MICROSTRUCTURE, AND APPARENT D.,
THE TEST SAMPLES DIFFERED ONLY IN TEXTURE (THE GRAIN SIZE OF THE
POLYCRYST. FILLER AND THE PORE SIZE DETD. BY IT). THE STRENGTH OF
POROUS CERAMIC (AS COMPARED TO THE DENSE ONE) IS DECREASED DUE TO THE
LOWER CONTACT STRENGTH, DECREASED CONTACT CROSS SECTION, AND DECREASED
STRESS CONCN. IN THE PORES. THE DEFORMATION RATE OF POROUS CORUNDUM
CERAMICS OF GRANULAR CONSTRUCTION DOES NOT DEPEND ON THE PORE SIZE AND
IS SIMILAR TO 1-2 AS GREAT AS THE DEFORMATION RATE OF CORUNDUM CERAMICS.
 AT 1350-1600DEGREES THE DEFORMATIOOF THE STRUCTURE IS DETD. BY THE VERY
SAME MECHANICSMS AS THE DEFORMATION OF DENSE MATERIALS. THE OBSD.
INCREASE IN THE DEFORMATION RATE IS ASSOCD. WITH THE INCREASE IN THE
EFFECTIVE STRESSES ARISING IN THE MATERIAL AS A RESULT OF THE WEAKENING
OF THE CROSS SECTION AND THE STRESS CONCNS. THE SUMMARY ACTION OF THE
FACTORS INDICATED CAN IN THE 1ST APPROXN. BE CONSIDERED EMPIRICALLY FROM
THE VALUE OF THE "LIMITING FRACTION OF THE CONTACT CROSS SECTION".
    FACILITY: MOSK. KHIM.-TEKHMOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

TITLE--STRENGTH AND DEFORMATION OF OXIDE CERAMICS -U-

AUTHOR-(04)-ADUSHKIN, L.YE., BAKUNOV, V.S., GUZMAN, I.YA., POLUBOYARINOV,
   D.N.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(4), 753-60

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MODEL, CORUNDUM CERAMIC, OXIDE CERAMIC, CERAMIC PRODUCT
   PROPERTY, POROSITY, MECHANICAL STRENGTH, PLASTIC DEFORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/1447   STEP NO--UR/0363/70/006/004/0753/0760

CIRC ACCESSION NO--AP0130380
                         UNCLASSIFIED

USSR   UDC 547.944/945

ABDUSALAMOV, B. A., ASLANOV, KH. A., SADYKOV, A. S., and KHOROSHKOVA, O. A., Tashkent Order of the Labor Red Banner State University imeni V. I. Lenin

"Investigation of the Alkaloid Content of Sophora Japonica"

Abstract: The alkaloids were extracted from dried, ground seeds of Sophora japonica L. After deoiling with petroleum ether, the seeds were treated with a methanol solution of potassium hydroxide, dried and extracted with chloroform. After reextraction with sulfuric acid and alkalinization with 10% KOH, the material was again extracted with chloroform to yield a group of eight alkaloids, from which it was possible to identify citizine, N-methylcitizine, sophocarpine, and matrine.

1/1

CIRC ACCESSION NO--AP0109398
ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT. THE PURE AUSTENITIC STEEL
OKH17N16M3T CONTG. SMALLER THAN 0.08PERCENTC AND ITS WELDED JOINTS WERE
MORE RESISTANT IN SOME CORROSIVE MEDIA (UREA, HNO SUB3, ETC.) THAN STEEL
KH17N13M3T TO GENERAL POINT, CREVICE, AND STRUCTURALLY SELECTIVE
CORROSION. IN HIGHLY OXIDIZING MEDIA, STEEL OKH17N16M3T IS SUBJECT TO
INTERCRYST. CORROSION: THEREFORE, EQUIPMENT MADE OF THIS STEEL FOR USE
IN THESE MEDIA SHOULD BE QUENCHED AT 1100DEGREES AFTER MANUF. HIGH
CORROSION RESISTANCE OF STEEL OKH17N16M3T WELDED JOINTS CAN BE OBTAINED
BY USING, IN OXIDIZING MEDIA, THE OZL-20 AND KHL-1 ELECTRODE IN THE CASE
OF ELEC. ARC WELDING, WHILE IN THE CASE OF AR ARC WELDING USE IS MADE
OF THE WELDING WIRE OOOKH17N14M2 OR OKH23N28M3D3T; IN REDUCING MEDIA
KHL-1 ELECTRODE OR THE WIRE OKH23N28M3D3T ARE USED. QUENCHING OF
WELDED JOINTS IMPROVES THEIR RESISTANCE TO CORROSION CRACKING.
FACILITY: VSES. NAUCH.-ISSLED. INST. KHIM, MASHINOSTR., MOSCOW, USSR.

UNCLASSIFIED

TITLE--CORROSION RESISTANCE OF PURE AUSTENITIC STEEL OKH17N16M3T -U-

AUTHOR-(04)-BELINKIY, A.L., KRISTAL, M.M., ZHELTOVA, G.A., ADUGINA, V.A.

COUNTRY OF INFO--USSR

SOURCE--ZASHCH. METAL. 1970, 6(1), 37-9

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--CORROSION RESISTANT STAINLESS STEEL, AUSTENITIC STEEL, ALLOY
   DESIGNATION, INTERGRANULAR CORROSION, CORROSION CRACKING, WELDING
   ELECTRODE, WELD JOINT, NITRIC ACID, UREA, OXIDATION, STEEL
   QUENCHING/(U)OKH23N28M3D3T STAINLESS STEEL, (U)000KH17N14M2 STAINLESS
   STEEL, (U)KH17N13M3T STAINLESS STEEL, (U)OKH17N16M3T STAINLESS STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1314   STEP NO--UR/0365/70/006/001/0037/0039

CIRC ACCESSION NO--AP0109398
                           UNCLASSIFIED

USSR

ZHELTOVA, G. A., et al., Metallovedeniye i Tormicheskaya Obrabotka Metallov, No 4, Apr 73, pp 12-15

network of carbides and chi-phase along the austenite grain boundaries, while for steel OKh17N16K3T this form of corrosion was observed after only four hours. The intercrystalline corrosion tendency for the investigated steels develops after a short soak at 700-850°C. The tendency of OKh17N16K3T steel and its weld joints is greater than for 000Kh16N15K3 steel and knife corrosion is absent in 000Kh16N15N3 steel when tested in nitric acid and in the medium of a synthesis column and the mixer for carbamide production. Four figures, 2 tables, 5 bibliographic references.

2/2

Heat Treatment

USSR   UDC 621.785:620.192.46:669.14.018.8

ZHELTOVA, G. A., BELINKIY, A. L., KRISTAL', M. M., ADUGINA, N. A., All-Union
Scientific Research and Design Institute of Chemical Machine Building

"Effect of Heat Treatment on the Tendency of OOOKh16N15M3 Steel to Inter-
crystalline Corrosion""

Abstract: Production of OOOKh16N15M3 steel in the form of chemical con-
tainers with 0.033 C (max) has been mastered and tested. Samples for metallo-
graphic studies and corrosion tests were quenched from 1100 and 1200°C with
30-minute soaks and repeated heating to 550-950°C every 50°C with 10 and 30-
minute, and 1-, 5-, 10-, 50-, and 100-hour soaks. Nitric acid (65%) was used
in the corrosion tests. It was found that heating at 550-950°C causes pre-
cipitation of carbides and chi-phase in OOOKh16N15M3 steel and precipitation
of carbides and the sigma- and chi-phases in OKj17N16M3T steel. With increased
quenching temperature the regions of carbide and intermetallide precipita-
tions for OOOKh16N15M3 steel correspond to the long soaking times. Inter-
crystalline corrosion was detected only after lengthy (not less than 10 hours)
thermal action for OOOKh16N15M3 steel causing precipitation of a continuous
1/2

USSR
UDC 621.762.4.001

ADADUROV, G. A., BREUSOV, O. N., DREMIN, A. N., and DROBYSHEV, V. N., Institute of New Chemical Problems, Academy of Sciences USSR, Affiliate of Institute of Chemical Physics, Academy of Sciences USSR

"Influence of Shock Waves of Refractory Compounds. I. Nitrides of Niobium, Zirconium, Silicon, Chromium and Gallium"

Abstract: The influence of shock compression on the nitrides of gallium, zirconium, silicon, chromium, and niobium was studied. It was demonstrated that all of the materials studied are converted from powders to strong bars with high micro-porosity under the influence of shock compression. It is established that gallium nitride decomposes into its elements, while zirconium and silicon nitrides undergo no visible changes, and the quality of the crystalline lattice of chromium nitride is significantly decreased. The hexagonal epsilon phase of niobium nitride is converted to the cubic delta phase by shock compression.
1/1

ADRIANOVA O.N.

Acc. Nr:

AP0041515

Abstracting Service: Ref. Code:

CHEMICAL ABST. UR 0078

85764m Amido reaction on optical isomers of (en)(py)ClNO₂-ClPtCl. Adrianova, O. N.; Golovaneva, I. F. (Inst. Obshch. Neorg. Khim. im. Kurnakova, Moscow, USSR). Zh. Neorg. Khim. 1970, 15(1), 279-80 (Russ). Amido reaction (a reversible cleavage of proton from a coordinated amine by a base) of (—)₅₈₉-(en)(py)ClNO₂.ClPtCl (I) were studied by ORD and CD spectra. ORD of I and of the product of its deprotonation, (en-H)-(py)ClNO₂ClPt (II), have the same (neg.) sign. The CD spectra of II, and I reveal 4 bands in 600–220 mμ region. On deprotonation, the 1st optically active band changed its sign and showed a bathochromic shift. A comparison of the CD of II with its absorption spectrum proved that, on deprotonation, the compd. did not get a new band at 344 mμ but only experienced a shift of the 331-mμ max. The remaining bands at 208, 229, 257, and 303 mμ were unchanged by the reaction. HMJR

L.P.

REEL/FRAME

19751383

CIRC ACCESSION NO--AP0139897

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CHARACTERISTIC OF A FABRY
PEROT ETALON WAS STUDIED BY USING A HE-NE LASER AS THE SOURCE OF LIGHT.
DIFFERENT VOLTAGES WERE APPLIED TO THE CRYSTAL AND A TRANSPARENCY VS V
PLOT WAS MADE. ON THE BASIS OF THE ELECTROOPTIC EFFECT IN THE CRYSTAL,
A FABRY PEROT INTERFEROMETER COULD BE UTILIZED FOR THE CONSTRUCTION OF A
LIGHT MODULATOR.

UNCLASSIFIED

TITLE--STRENGTH AND DEFORMATION OF OXIDE CERAMICS -U-

AUTHOR-(04)-ADUSHKIN, L.YE., BAKUNOV, V.S., GUZMAN, I.YA., POLUBOYARINOV,
   D.N.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. '970, 6(4), 753-60

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MODEL, CORUNDUM CERAMIC, OXIDE CERAMIC, CERAMIC PRODUCT
   PROPERTY, POROSITY, MECHANICAL STRENGTH, PLASTIC DEFORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/1447   STEP NO--UR/0363/70/006/004/0753/0760

CIRC ACCESSION NO--AP0130380
                        UNCLASSIFIED

USSR

UDC 547.944/945

ABDUSALAMOV, B. A., ASLANOV, KH. A., SADYKOV, A. S., and KHOROSHKOVA, O. A.,
Tashkent Order of the Labor Red Banner State University imeni V. I. Lenin

"Investigation of the Alkaloid Content of Sophora Japonica"

Abstract: The alkaloids were extracted from dried, ground seeds of Sophora
japonica L. After deoiling with petroleum ether, the seeds were treated
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chloroform. After reextraction with sulfuric acid and alkalinization with
10% KOH, the material was again extracted with chloroform to yield a group
of eight alkaloids, from which it was possible to identify citizine,
N-methylcitizine, sophocarpine, and matrine.

1/1

CIRC ACCESSION NO--AP0109398
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PURE AUSTENITIC STEEL
OKH17N16M3T CONTG. SMALLER THAN 0.03PERCENTC AND ITS WELDED JOINTS WERE
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KH17N13M3T TO GENERAL POINT, CREVICE, AND STRUCTURALLY SELECTIVE
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CORROSION RESISTANCE OF STEEL OKH17N16M3T WELDED JOINTS CAN BE OBTAINED
BY USING, IN OXIDIZING MEDIA, THE OZL-20 AND KHL-1 ELECTRODE IN THE CASE
OF ELEC. ARC WELDING, WHILE IN THE CASE OF AR ARC WELDING USE IS MADE
OF THE WELDING WIRE 000KH17N14M2 OR OKH23N28M3D3T; IN REDUCING MEDIA
KHL-1 ELECTRODE OR THE WIRE OKH23N28M3D3T ARE USED. QUENCHING OF
WELDED JOINTS IMPROVES THEIR RESISTANCE TO CORROSION CRACKING.
FACILITY: VSES. NAUCH.-ISSLED. INST. KHIM, MASHINOSTR., MOSCOW, USSR.

TITLE--CORROSION RESISTANCE OF PURE AUSTENITIC STEEL OKH17N16M3T -U-

AUTHOR-(04)-BELINKIY, A.L., KRISTAL, M.M., ZHELTOVA, G.A., ADUGINA, N.A.

COUNTRY OF INFO--USSR

SOURCE--ZASHCH. METAL. 1970, 6(1), 37-9

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--CORROSION RESISTANT STAINLESS STEEL, AUSTENITIC STEEL, ALLOY
   DESIGNATION, INTERGRANULAR CORROSION, CORROSION CRACKING, WELDING
   ELECTRODE, WELD JOINT, NITRIC ACID, UREA, OXIDATION, STEEL
   QUENCHING/(U)OKH23N28M3D3T STAINLESS STEEL, (U)000KH17N14M2 STAINLESS
   STEEL, (U)KH17N13M3T STAINLESS STEEL, (U)OKH17N16M3T STAINLESS STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1314   STEP NO--UR/0365/70/006/001/0037/0039

CIRC ACCESSION NO--AP0109398
                         UNCLASSIFIED

ILLEGIBLE

UDC 621.7...

USSR

ZHELTOVA, G. A., BELITSKIY, A. L., KRISTAL', M. M., ADUCHIA, R. A., All-Union
Scientific Research and Design Institute of Chemical Machine Building

"Effect of Heat Treatment on the Tendency of OOOKh16N15M3 Steel to Inter-
crystalline Corrosion""

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 4, Apr 73,
pp 12-15

Abstract: Production of OOOKh16N15M3 steel in the form of chemical con-
tainers with 0.03% C (max) has been mastered and tested. Samples for metallo-
graphic studies and corrosion tests were quenched from 1100 and 1200°C with
30-minute soaks and repeated heating to 550-950°C every 50°C with 10 and 30-
minute, and 1-, 5-, 10-, 50-, and 100-hour soaks. Nitric acid (65%) was used
in the corrosion tests. It was found that heating at 550-950°C causes pre-
cipitation of carbides and chi-phase in OOOKh16N15M3 steel and precipitation
of carbides and the sigma- and chi-phases in OKh17N16M3T steel. With increased
quenching temperature the regions of carbide and intermetallide precipita-
tions for OOOKh16N15M3 steel correspond to the long soaking times. Inter-
crystalline corrosion was detected only after lengthy (not less than 10 hours)
thermal action for OOOKh16N15M3 steel causing precipitation of a continuous

1/2

USSR

UDC 621.762.4.001

ADADUROV, G. A., BREUSOV, O. N., DREMIN, A. N., and DROBYSHEV, V. N., Institute of New Chemical Problems, Academy of Sciences USSR, Affiliate of Institute of Chemical Physics, Academy of Sciences USSR

"Influence of Shock Waves of Refractory Compounds. I. Nitrides of Niobium, Zirconium, Silicon, Chromium and Gallium"

Abstract: The influence of shock compression on the nitrides of gallium, zirconium, silicon, chromium, and niobium was studied. It was demonstrated that all of the materials studied are converted from powders to strong bars with high microporosity under the influence of shock compression. It is established that gallium nitride decomposes into its elements, while zirconium and silicon nitrides undergo no visible changes, and the quality of the crystalline lattice of chromium nitride is significantly decreased. The hexagonal epsilon phase of niobium nitride is converted to the cubic delta phase by shock compression.

1/1

ADRIANOVA O.N.

Acc. Nr: Abstracting Service: Ref. Code:
AP0041515 CHEMICAL ABST. UR 0078

85764m Amido reaction on optical isomers of (en)(py)ClNO₂-
ClPtCl. Adrianova, O. N.; Golovaneva, I. F. (Inst. Obshch.
Neorg. Khim. im. Kurnakova, Moscow, USSR). Zh. Neorg.
Khim. 1970, 15(1), 279-80 (Russ). Amido reaction (a reversible
cleavage of proton from a coordinated amine by a base) of (−)₅₄₉·
(en)(py)ClNO₂.ClPtCl (I) were studied by ORD and CD spec-
tra. ORD of I and of the product of its deprotonation, (en-H)-
(py)ClNO₂ClPt (II), have the same (neg.) sign. The CD
spectra of II, and I reveal 4 bands in 600-220 mμ region. On
deprotonation, the 1st optically active band changed its sign
and showed a bathochromic shift. A comparison of the CD of
II with its absorption spectrum proved that, on deprotonation,
the compd. did not get a new band at 344 mμ but only experienced
a shift of the 331-mμ max. The remaining bands at 208, 229,
257, and 303 mμ were unchanged by the reaction. HMJR

LD

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REEL/FRAME
19751383

UNCLASSIFIED   PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0139897

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CHARACTERISTIC OF A FABRY
PEROT ETALON WAS STUDIED BY USING A HE-NE LASER AS THE SOURCE OF LIGHT.
DIFFERENT VOLTAGES WERE APPLIED TO THE CRYSTAL AND A TRANSPARENCY VS V
PLOT WAS MADE. ON THE BASIS OF THE ELECTROOPTIC EFFECT IN THE CRYSTAL,
A FABRY PEROT INTERFEROMETER COULD BE UTILIZED FOR THE CONSTRUCTION OF A
LIGHT MODULATOR.

UNCLASSIFIED

1/2   028   UNCLASSIFIED   PROCESSING DATE--04DEC70
TITLE--ELECTROOPTICAL LIGHT MODULATORS BASED ON A FABRY PEROT ETALON -U-

AUTHOR-(02)-ADRIANOVA, I.I., ZASLAVSKAYA, V.R.

COUNTRY OF INFO--USSR

SOURCE--OPT.MEKH. PROM. 1970, 37(2), 21-4

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTROOPTIC OME, LIGHT MODULATOR, FABRY PEROT INTERFEROMETER,
   HELIUM NEON LASER, CRYSTAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605007/E02 STEP NO--UR/0237/70/037/002/0021/0024

CIRC ACCESSION NO--AP0139897
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0124788

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THEORETICAL AND EXPTL.
INVESTIGATION WAS MADE OF THE WIDE BAND UHF MODULATION OF LIGHT OBTAINED
DURING THE 4 FOLD TRANSMISSION OF LIGHT THROUGH AN ELECYROOPTICAL
CRYSTAL IN A RECTANGULAR WAVEGUIDE. THE MODULATION DIP RELATED TO THE
MIDDLE PART OF THE STATISTICAL CHARACTERISTICS WAS 21PERCENT AT THE
MODULATOR POWER SUPPLY SMALLER THAN 1 W, PERIODICITY 1 KHZ, AND THE
MODULATION FREQUENCY 2.2 GHZ.   THE WIDTH OF THE FREQUENCY BAND WAS
LARGER THAN 450 MHZ.

UNCLASSIFIED

1/2   030   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--WIDE BAND UHF ULTRAHIGH FREQUENCY LIGHT MODULATION DURING THE
   FOURFOLD TRANSMISSION OF LIGHT THROUGH AN ELECTROOPTICAL CRYSTAL -U-
AUTHOR-(02)-ADRIANOVA, I.I., NESTEROVA, Z.V.

COUNTRY OF INFO--USSR

SOURCE--OPT. SPEKTROSK. 1970, 28(3), 566-71

DATE PUBLISHED------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTROOPTIC EFFECT, LIGHT MODULATION, ULTRAHIGH FREQUENCY,
   OPTIC CRYSTAL, RECTANGULAR WAVEGUIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1133   STEP NO--UR/0051/70/028/003/0566/0571

CIRC ACCESSION NO--AP0124788
                         UNCLASSIFIED

USSR

Adrianova, I. I., Asnis, L. N., Vereshchaka, A. I., Nesterova, Z. V., and
Popov, Yu. V., Optiko-Mekhanicheskaya Promyshlennost', No 5, 1972, pp 8-11.

of an optical radiation modulator and converter in a light rangefinder with
frequency conversion and dual light modulation.

2/2

- 68 -

Precision Mechanical and Optical

USSR   UDC: 528.519:621.376

Adrianova, I. I., Candidate of Technical Sciences, Asnis, L. M., Vereshchaka, A. I., Nesterova, Z. V., Candidate of Technical Sciences, and Popov, Yu. V., Candidate of Technical Sciences

"Frequency Conversion with Dual Modulation of Light in Light Rangefinders"

Abstract: Nonlinear distortions are studied with dual modulation by polarization, resulting from operating modes of light modulators. It is shown that with the maximum signal at the intermediate frequency, the nonlinear distortions amount to 27%. It is found to be possible to decrease nonlinear distortions by selecting the operating mode of the light modulator and converter. In contrast to the method of the phase detector, in the light modulator studied, the method of conversion of frequency in the modulator is free of errors related to changing position of the plane of polarization of radiation as it propagates from the modulator to the converter. Thus, when the converter is missmatched with the modulator by $\pm 15°$, equivalent to rotating the plane of polarization of the radiation by the same angle, the phase error does not exceed the error of the measuring device ($\pm 1°$). The results produced can be used to select the operating mode

1/2

USSR

ADRIANOVA, I. I., et al, Kvantovaya elektronika, No 7, 1972, pp 81-82

cubic crystal in this application is far more advantageous than the use of other types. They conclude by thanking A. K. Dubenskiy and V. A. Sokolov for preparing the ZnSe crystals.

2/2

ADRIANOVA, I. I., BEREZHNOY, A. A., NESTEROVA, Z. V., and RUSETSKAYA, V. S.

"Ultra High-Frequency Light Modulation by Electrooptical Effects
in a Zinc Selenide Crystal"

Abstract: It is asserted that cubic crystals have a number of ad-
vantages for use as light modulators due to the absence of a
natural anisotropy and the presence of a linear electrooptical
effect. Because of the first of these advantages, the optical
system can be simplified and the modulator aperture increased;
because of the second, the crystals are especially promising as
light modulators at a uhf rate. This brief communication de-
scribes experiments performed with a uhf light modulator using a
ZnSe crystal, which has a cubic structure, set in a waveguide.
The latter is of rectangular cross section measuring 42 by 2 mm,
and the crystal dimensions are 14 X 4 X 2 mm. A diagram of the
device is shown. The frequency used in the experiments was 2600
MHz, and the uhf voltage applied to the modulator was obtained
from a standard GI-10A oscillator operating in pulse mode at a
repetition rate of 1 kHz, with a duty cycle of 7 and a power
level of less than 1 watt. The authors find that use of the

USSR   UDC 615.477:616-089.29

ADRIANOV, YU. M., ZEL'TSER, A. YA., MATVEYEV, A. P., and FARBEROV, A. L.,

"Prosthetic Arm With Electrohydraulic Drive Mechanism"

Translation of Russian Abstract: A prosthetic arm with electrohydraulic drive
mechanism is described. It includes an artificial wrist, forearm and shoulder
sockets, a nonreversible pump, hydrocylinders, an electric motor and battery,
overflow valve, compensation reservoir, valve distributors, and electronic
control units. It is distinguished by the fact that, in order to regulate grasp-
ing force and ensure parallel operation of the working parts, hydraulic
resistance is established in it parallel to the hydraulic relay element, for
example in the form of a constant choke with advance regulation. This interacts
with the elastic wrist element which is made in the shape of a spring and
connected by a coupling rod to the hydrocylinder ram and the lever elements
of the wrist mechanism. For each pair of movements, two value distributors
are installed with control coils containing two support elements.

1/1

USSR

ADRIANOV, V. N., Teplo-Massopernos v Odno-i Dvukhfaznykh Sredakh, 1971, pp 78-92

Table I gives the surface radiation densities for the outside surface and for the effective surface of the particles.

2/2

- 33 -

USSR   UDC 536.243

ADRIANOV, V.N.

"Generalized Integral Equations of Radiation Heat Transfer"

Moscow, Teplo-Massopernos v Odno-i Dvukhfaznykh Sredakh,
1971, pp 78-92

Abstract: The paper analyzes the heat transfer inside a closed
radiation system.
     A system of Integral equations (28) and (29) are derived for
the total radiation including the full range of frequencies. These
equations contain integrals over the volume of the system and
integrals over the surface enclosing the system.
     It is proposed to consider the surface of all the particles
(molecules, atoms, ions and so forth) contained in the volume,
rather than the volume itself. Then the integrals over the volume
can be eliminated and the integral equations (28) and (29) are
replaced by one generalized integral equation (44).
1/2

Instruments and Equipment

AVIROM, V. M., ADRIANOV, O. S., VYKHODTSEVA, N. I., GAVRILOV, L. R., MERING, T. A., and SIROTYUK, M. G., Institute of Acoustics, Academy of Sciences USSR, and Brain Institute, Academy of Medical Sciences USSR

"Destruction of Deep-Lying Brain Structures With Focused Ultrasound"

Abstract: An apparatus designed to minimize the loss of ultrasonic energy at high frequencies and intensities of ultrasound is described. It consists of an oscillator, ultrasound emitter, universal standard stereotaxic device to hold the animal, and a device to permit ultrasound to be transmitted to the animal's brain. The focusing emitter rests on a concave resonant plate of piezoelectric ceramic 85 mm in diameter with a focal length of 70 mm. Acoustic energy is transmitted from the emitter to the brain through degassed water (or physiological saline). Degassed water is poured into a rubber bottle connected to the frame of the emitter and inot a small funnel attached to the animal's head. The article concludes with a description of the surgical technique recommended for preparing the brains of rabbits and rats prior to ultrasonication.

1/1

USSR

UDC 518.5.681.3.06

ADONTS, M. M., YUSHCHENKO, Ye. L.

"Solution of Large Systems of Algebraic Equations by Scale of Coefficients"

Translation: A method is described for solving systems of high order linear algebraic equations with symmetrical matrices such as the matrices of internal and cross conductivities $||Y||$ having arbitrary structure of placement of non zero elements. Increasing the possible order of the system is achieved by reducing the initial information, in that the machine is given only the non zero coefficients of the system and additional information on the initial structure of the matrix. The method selected for solution of the system is realized by special reviewing and changing of additional information causing changes in the magnitude and number of coefficients introduced.

1/1

USSR

ADONTS, G. T., Izvestiya Akademii Nauk Armyanskoy SSR, Vol 23, No 3, 1970, pp 20-26

3. The establishment of centralized automated systems for information processing makes possible not only the achievement of optimal solutions to management problems but also the rapid utilization of scientific results obtained in one area in many other regions which share a common algorithm for the optimal control of equipment or systems.

2/2

USSR

ADONTS, G. T.

"The Role of Information in Management Problems"

Yerevan, Izvestiya Akademii Nauk Armyanskoy SSR, Vol 23, No 3, 1970, pp 20-26

Abstract: The original article is in Armenian only. This is a complete translation of the Russian summary published with it.

1. Thanks to the increasing concentration of equipment and power resources in industry and to the outstanding achievements of science in the most varied fields of knowledge, we have developed machines, installations, complexes, and systems whose control requires a volume of information which has grown from tens of thousands to several million information units.

2. Due to inadequate technical capabilities for the collection, storage, processing, and transmission of information, a number of problems in the control of general classes of equipment are solved by nonoptimal techniques. The absence of the means for optimal control leads to an enormous economic loss. Management without complete information (i.e., lacking necessary information) can lead to emergency disruptions of the control process and to economic losses.

1/2

- 97 -

USSR   UDC: 535.818.9

ADONINA, A. I., ANDRUSENKO, A. M., and SLYUSARSKIY, V. A.

"Prism Polarizers"

Abstract: In this paper, the authors consider the problem of the passage of
an electromagnetic wave through a Dove/transliteration uncertain] prism or
Fresnel rhombus with the multiple reflections taken into account. For the
computations, they use the method of direct summation of the multiple reflec-
tions. The assumption is made that the cross section of the electromagnetic
wave beam incident on the face of the prism or rhombus is much smaller than the
area of that face. Dimensions of the device to be investigated arc chosen such
that the incident beam undergoes an integral number of reflections from the
device's upper and lower bounds, with the beam in the Dove prism undergoing an
odd number of reflections and the beam in the Fresnel rhombus undergoing an
even number. The case in which the wave incident on the face of the device
has a definite polarization is examined. Theoretical computations of the basic
characteristics of elliptically polarized waves were made on an electronic com-
puter.

1/1

ADONIN, A.S.

K-5. PROBLEM OF THE MECHANISM OF SPARK ALLOYING IN THE PRESENCE OF EPITAXIAL GROWTH OF SEMICONDUCTOR MATERIALS

[Article by A. S. Adonin, L. N. Mikhaylov, V. V. Bondarenko, O. M. Sorokina, Moscow; Novosibirsk, III Simpozium po Protsessam Rosta i Sinteza Poluprovodnikovyth Kristallov i Plenok, Funstion, 13-17 June 1972, p 117]

Using the spark method of alloying, epitaxial structures were obtained with a distribution of the alloying admixture according to the required law which insures given dependence of the capacitance on the voltage in varicaps.

The mechanism of spark alloying was investigated. The hypothesis of erosion of the electrodes by the mechanism of electrical explosion of wires was confirmed. The presence of aerosol particles in the gas-carrier flow was detected, and their distribution with respect to dimensions was investigated. It was established that the basic mass of alloying material is transported in the form of particles < 0.1 microns. A study was made of the effect of the gas medium and the discharge parameters on the fractional composition of the aerosols. The effect of the aerosols on the alloying level of the epitaxial layers was discovered.

- 136 -

ADONIN, A.S.

SPKS 8,265
u -73

IV-7. SOME METHODS OF LOW TEMPERATURE EPITAXY OF SILICON

[Article by L. N. Mikhaylov, M. Ya. Fatrin, A. S. Adonin, V. V. Bondarenko,
L. I. Kuz'mina, Moscow; Novosibirsk, III Simpozium po Protsessam Rosta i
Poluprovodnikovykh Kristallov i Plenok, Russian, 12-17 June, 1972, P 49]

A study was made of the temperature dependence of the growth rate of the
epitaxial layers in the chloride system for epitaxy with high temperature in-
oculation. The decrease in apparent activation energy of the growth process
was noted for high temperature inoculation, ultraviolet radiation and preliminary
heating of the hydrogen to a value of - 5 kcal/mole which is explained by a
decrease in the gas adsorption on the substrate surface.

The use of a mixture of monosilane with an inert gas (helium) also led
to a significant reduction in the epitaxial growth temperature. The perfect
epitaxial layers were obtained for a temperature of 850°C. The reduction in
growth temperature is explained by a significant shift of equilibrium of the
reaction of the decomposed monosilane in the direction of formation of elementary
silicon and a decrease in the adsorption of hydrogen on the substrate surface.

Conclusions were drawn regarding the possibilities of a further reduction
in the epitaxy temperature.

- 47 -

Genetics

USSR   UDC: 575.23:578.085.23

AIDMAYTEIE, D., Laboratory of Tumor Cell Genetics, Institute of Cytology, Academy of Sciences USSR, Leningrad

"Obtaining Cells Hereditarily Resistant to 8-Azaguanine in an L Population Treated With 5-Bromodesoxyuridine"

Abstract: Treatment of L cells with 5-bromodesoxyuridine (5-BDU) produced a subline of cells resistant to 8-azaguanine. 5-BDU was highly mutagenic; the highest frequency of appearance of variants resistant to 8-azaguanine $(0.7 \cdot 10^{-3})$ exceeded by a factor of 300 the frequency with which resistant variants arose spontaneously in the untreated control. No differences were detected between the karyotypes of the two sublines (induced and spontaneous) resistant to 8-azaguanine. A direct relationship was observed between the number of resistant cells induced by 5-BDU and the duration of exposure to the mutagen. The longer the exposure, the more likely the inclusion of the agent in chromosomal DNA, and the more likely the possibility of mutations. That resistance to 8-azaguanine is a hereditary marker is shown by the fact that resistant cells continued to appear in the L population, even after 2 months' cultivation in a medium without 5-BDU.
1/1

CIRC ACCESSION NO--AP0131350

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROCESS AND CHARACTER OF WORKS
ON COMPLEX TUNING AND START UP OF THE ACCELERATOR ARE DESCRIBED.
FEATURES AND METHODS OF TUNING OF THE MAIN ACCELERATOR SYSTEMS ARE
BRIEFLY DISCUSSED (RING ELECTROMAGNET, POWER SUPPLY SYSTEM, CORRECTION
SYSTEM, INJECTION SYSTEM, VACUUM SYSTEM, AND RADIOTECHNICAL SYSTEMS).
THE MAIN RESULTS OBTAINED DURING THE ACCELERATOR TUNING ARE REPORTED.
     FACILITY: INST. OF THEORETICAL AND EXPERIMENTAL PHYSICS, MOSCOW.

UNCLASSIFIED

TITLE--SOME RESULTS OF COMPLEX TUNING AND START UP OF THE IHEP 70 GEV
   PROTON SYNCHROTRON -U-

AUTHOR-(03)-ADO, YU.M., ZHURAVLEV, A.A., LOGUNOV, A.A.

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. (USSR): 28: 132-8 (FEB 1970).

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PROTON ACCELERATOR, PARTICLE PHYSICS, SYNCHROTRON/(U)IHEP
   PROTON ACCELERATOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0755   STEP NO--UR/0089/70/028/000/0132/0138

CIRC ACCESSION NO--AP0131350
                         UNCLASSIFIED

USSR

ADO, YU. M., et al., Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

intensity of the accelerated proton was not raised.

The article gives a listing of the principal parameters of the proton synchrotron, as well as a schedule of the individual stages of the start-up of the accelerator. Photographs include a view of the part of the ring hall in the beam injection area and a general view of the hall of ignitron rectifiers.

4/4

USSR

1967. At the initial stage of construction, before the formation of the Institute of High-energy Physics in 1963, tne work was coordinated by tne Institute of Theoretical and Experimental Physics. The linear accelerator injector was started on 28 July 1967, the operation of the individual systems was adjusted by September 1967, and the physical start-up of the accelerator was accomplished on 14 October.

A description is given of the work done to adjust the annular electromagnet (including the electromagnet cooling and feed systems), the injection system (consisting of matching channel and injection device), the vacuum system, the radioelectronic system (including the accelerating field generation system, the acceleration process control system, and the radiotechnical measurement system), and the beam observation system (which provides for beam observation in the first revolution and during acceleration). In the physical start-up of the accelerator the main efforts were directed towards obtaining accelerated protons of the planned energy, and the problem of obtaining high

3/4

USSR

the accelerating field, as well as the radiotechnical measurement and
beam observation systems, were developed by the Radiotechnical Insti-
tute of the Academy of Sciences USSR. "Tyazhpromelektroproyekt"
[State Planning Institute for the Planning of Electrical Equipment
for Heavy Industry] designed the general-purpose electrotechnical de-
vices and cable connections. The plan for the construction complex
of the accelerator was developed by the State All-Union Planning In-
stitute. The construction of the accelerator was under the general
supervision of the State Committee for the Use of Atomic Energy USSR.
The adjustment of individual systems and the overall adjustment and
start-up of the accelerator were carried out by the Institute of
High-energy Physics and the developers of the accelerator systems.
The basic beam work was done by the Institute of High-energy Physics
with the participation of the Radiotechnical Institute. The con-
struction of the accelerator was begun in 1960, and all the basic
construction and assembly work was completed at the beginning of

2/4

A

USSR

ADO, YU. M., ZHURAVLEV, A. A., LOGUNOV, A. A., MYAE, E. A., NAUMOV,
A. A., PISAREVSKIY, V. YE., ROGOZINSKIY, V. G., TUSHABRAMISHVILI, K.
Z., SHUKEYLO, I. A., BOYKO, S. N., KOMAR, YE. G., MALYSHEV, I. F.,
MOZIN, I. V., MONOSZON, N. A., MOZALEVSKIY, I. A., SPEVAKOVA, F. M.,
STOLOV, A. M., TITOV, V. A., VODOP'YANOV, F. A., KUZ'MIN, A. A., KUZ'-
MIN, V. F., MINTS, A. L., RUBCHINSKIY, S. M., UVAROV, V. A., GUTNER,
B. M., ZALMANZON, V. B., PROKOP'YEV, A. I., and TEMKIN, A. S.

"Some Results of the Overall Adjustment and Start-up of the 70-Gev
Proton Synchrotron of the Institute of High-energy Physics"

Abstract: The physical part of the plan for the 70-Gev proton syn-
chrotron was executed by the Institute of Theoretical and Experimental
Physics. The electromagnet with feed system, the vacuum chamber, and
the injection devices were developed at the Scientific Research Insti-
tute of Electrophysical Apparatus imeni D. V. Yefremov. The radio-
electronic systems for acceleration process control and generation of

1/4

USSR

ADO, YU. M., et al., Fotomezonnyye i Fotoyadernyye Reaktsii i Metodika
Issledovaniya na Sinkhrotrone. Trudy Ordena Lenina Fizicheskogo Instituta im.
P. N. Lebedeva Akademii Nauk SSSR, Vol 54, 1971, pp 130-148

1.5-Gev Adone positron storage ring, the 6-Gev Cambridge electron synchrotron
project in the United States, and the cascade storage system developed by
staff members of the Photomeson Process Laboratory and Accelerator Laboratory
of FIAN. The particle storage process is divided into two stages in the
cascade system: 1) particle storage in a booster synchrotron, 2) transfer of
electron and positron beams to the main synchrotron at intervals equal to the
booster particle storage time. Another variant of the cascade system permits
a significant increase in the electron beam conversion ratio through the use
of high-energy electrons accelerated in the main synchrotron.

2/2

USSR

UDC 621.384.612

ADO, YU. M., BELOVINTSEV, K. A., BESSONOV, YE. G., and CHEREMKOV, P. A.

"Colliding Electron-Positron Beams in a Synchrotron"

Moscow, Fotonezonnyye i Fotoyadernyye Reaktsii i Metodika Issledovaniya na Sinkhrotrone. Trudy Ordena Lenina Fizicheskogo Instituta im. P. N. Lebedeva Akademii Nauk SSSR, Vol 54, 1971, pp 130-148

Abstract: The article generalizes the main results of research on a method for obtaining colliding electron-positron beams in a synchrotron. There is a detailed discussion of questions related to the effect of a time-varying, driving magnetic field and a low injection energy level on the main parameters of the particle storage process — radiation damping of oscillation amplitudes, beam lifetime, and storage rate. A description is given of the results of experiments for studying the particle storage process and obtaining colliding electron-positron beams on the FIAN /Physics Institute imeni P. N. Lebedev, Academy of Sciences USSR/ 280-Mev synchrotron. There is also a description of work done in the USSR and abroad to use the counterbeam method for synchrotrons with an energy of ~ 1 Gev or more, including the Italian

1/2

CIRC ACCESSION NO--AP0121304

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STUDY DEALT WITH THE
POSSIBILITY OF INDUCING IMMUNOLOGICAL TOLERANCE TO DNCB IN EXPERIMENTAL
GUINEA PIGS. TO OBTAIN THIS PHENOMENON EXPERIMENTAL GUINEA PIGS BEFORE
THE PERIOD OF SENSITIZATION WERE INOCULATED INTRAPERITONEALLY WITH DNCB
AL NE AND DNP,BGG AND DNP,BF CONJUGATES. THE POSSIBILITY OF INDUCING
"CROSS" SKIN ALLERGIC REACTIONS OF A DELAYED TYPE BETWEEN DNCB AND
DNP,BGG AND KNP,BF CONJUGATES HAS BEEN DEMONSTRATED IN THE STUDY.
  FACILITY: KAFEDRA PATOFIZIOLOGII UNIVERSITETA DRUZHBY NARODOV IM.
PATRISA LUMUMBY.

1/2   015   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--ON IMMUNOLOGICAL TOLERANCE OF EXPERIMENTAL GUINEA PIGS TO
   DINITROPHENYL AND SERUM PROTEIN CONJUGATES -U-
AUTHOR--ADO, V.A.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK DERMATOLOGII I VENEROLOGII, 1970, NR 5, PP 44-47

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--IMMUNOLOGY, GUINEA PIG, SIRUM PROTEIN, SKIN, ALLERGIC DISEASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0637   STEP NO--UR/0206/70/000/005/0044/0047

CIRC ACCESSION NU--AP0121304
                              UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0131323
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POSSIBILITY OF CREATING
IMMUNOLOGICAL TOLERANCE IN GUINEA PIGS TO
2,4,DINITROCHLOROBENZENE,INDUCED (DNCB) EXTRINSIC DERMATITIS WAS
STUDIED.   TO THIS END USE WAS MADE OF PREVENTIVE INTRAPERITONEAL
ADMINISTRATION OF DNCB PROPER, PRACTISED BEFORE SENSITIZATION,
INTRAPERITONEAL INJECTION OF A DINITROPHENOL PLUS BOVINE GAMMA GLOBULIN
(DNP PLUS BGG) CONJUGATE, ALONG WITH THE ONE COMPRISING DINITROPHENOL
PLUS BOVINE FIBRINOGEN (DNP PLUS BF). BY EMPLOYING THESE METHODS IT IS
POSSIBLE TO EVOKE IN GUINEA PIGS IMMUNOLOGICAL TOLERANCE FOR DNCB, THIS
BEING MORE INTENSIVE WHEN BOTH CONJUGATE AGENTS ARE USED VIA THE
INTRAPERITONEAL ROUTE.   THE POSSIBILITY OF DELAYED TYPE CROSS REACTIVITY
DEVELOPING BETWEEN TWO RELATED (BY HAPTENE) COMPOUNDS OF LOW MOLECULAR
SUBSTANCES CONTAINING PROTEINS E. G. BETWEEN DNP PLUS BGG AND DNP PLUS
BF, IS DEMONSTRATED.   PREVENTIVE (PRIOR TO TESTING) OF EXTRINSIC
ALLERGIC REACTIONS TO A GREATER DEGREE AND FOR A LONGER TIME THAN DOES
INTRAVENOUS ADMINISTRATION OF DNCB ALONE.   FACILITY: UNIVERSITET
DRUZHBY NARODOV IM. P. LUMUMBY.

UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--20NOV70

1/2   032
TITLE--IMMUNOLOGICAL TOLERANCE AND SPECIFIC INHIBITION WITH CONJUGATE
   AGENTS OF AN EXPERIMENTAL 2,4,DINITROCHLOROBENZENE,INDUCED EXTRINSIC
AUTHOR--ACE, V.A.

COUNTRY OF INFO--USSR

SOURCE--GIGIYENA TRUDA I PROFESSIONAL'NYYE ZABOLEVANIYA, 1970, NR 6, PP
   15-19
DATE PUBLISHED------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ATOPIC DERMATITIS, ORGANIC NITRO COMPOUND, CHLORINATED ORGANIC
   COMPOUND, BENZENE DERIVATIVE, IMMUNOLOGY, GAMMA GLOBULIN, FIBRINOGEN,
   HAPTEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/0726   STEP NO--UR/0391/70/000/006/0015/0019

CIRC ACCESSION NO--AP0131323
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0127360

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SECRETION OF CORTIZOL AND
CORTICOSTERONE BY ISOLATED ADRENAL GLANDS OF INTACT AND
HYPOPHYSECTOMIZED DOGS WAS EXAMINED IN PERFUSION OF THE ADRENAL GLANDS
IN SITU WITH A BLOOD SUBSTITUTING SOLUTION. WITHIN 9 TO 15 MINUTES FROM
THE ONSET OF PERFUSION SECRETION OF CORTICOSTEROIDS (CS) IN INTACT DOGS
WAS MAXIMALLY STIMULATED BY THE OPERATIVE STRESS, AND EXCEEDED THE CS
SECRETION IN HYPOPHYSECROMIZED DOGS 4 TO 5 TIMES. THE ACTION OF NATIVE
ACTH STOPS 18 TO 36 MINUTES FROM THE BEGINNING OF PERFUSION, AND THE
SECRETION OF CS IN INTACT ANIMALS FALLS, REACHING THE LEVEL OF CS
SECRETION IN NYPOPHYSECTOMIZED DOGS. ADRENAL GLANDS OF THE ANIMALS OF
BOTH GROUPS GIVE THE SAME REACTION IN RESPONSE TO THE ADMINISTRATION OF
0.4 UNITS-ML OF EXOGENOUS ACTH, AND PERMIT TO TEST THE DIRECT ACTION OF
THE ALLERGENS AND OF THE OTHER PREPARATIONS ON THE FUNCTION OF THE
ADRENAL CORTEX IN PERFUSION WITH A BLOOD SUBSTITUTING SOLUTION IN DOGS,
WITHOUT PRELIMINARY HYPOPHYSECTOMY.   FACILITY: KAFEDRA
PATOLOGICHESKOY FIZIOLOGII II MOSKOVSKOGO MEDITSINSKOGO INSTITUTA IM. N.
I. PIROGOVA.

UNCLASSIFIED

TITLE--A METHOD OF EXAMINATION OF THE DIRECT ACTION OF ALLERGENS ON THE
    FUNCTION OF THE ADRENAL CORTEX UNDER EXPERIMENTAL CONDITIONS -U-

AUTHOR-(03)-ADO, A.D., PYTSKIY, V.I., TOMILETS, V.A.

CCUNTRY OF INFO--USSR

SOURCE--PATOLOGICHESKAYA FIZIOLOGIAY I EKSPERIMENTAL'NAYA TERAPIYA, 1970,
    VOL. 14, NR 3, PP 55-59

DATE PUBLISHED------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PITUITARY GLAND, SURGERY, ADRENAL GLAND, CORTICOSTEROID, ACTH,
    MEDICAL EXPERIMENT

CCNTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1959   STEP NO--UR/0396/70/014/003/0055/0059

CIRC ACCESSICN NO--AP0127360
                        UNCLASSIFIED

USSR

ADO, A. D., "New Virus-Induced Intermediate Antigens in Nervous
Tissue Infected With Neuroviruses," pp 144; 153

all of the antibodies except antibodies to intermediate antigens.
Complement fixation reaction was used to detect formation of
intermediate antigens in nervous tissue in the course of
Herpes simplex infection. These intermediate antigens differ
in their immunological properties from those of the virus and
the tissue in which they are formed. The use of the Ouchterlony
precipitation reaction in agar established antigenic differ-
ences between the brain of healthy mice and the brain of mice
infected with Herpes simplex. The concentration of intermediate
antigens in the brain of animals infected with Herpes virus
reaches its maximum 48 hours after infection.

2/2

USSR

ADO, A. D., Allergic Laboratory, Academy of Medical Sciences
USSR, Moscow

"New Virus-Induced Intermediate Antigens in Nervous Tissue
Infected With Neuroviruses," pp 144;153

Abstract: In 1959 Ado and Kanchurin established that as a
result of the replication of viruses of rabies, poliomyelitis,
tickborne encephalitis, and herpes in nervous tissue and the
interaction of these viruses with nervous tissue, new antigenic
products known as intermediate antigens are formed. Experi-
ments were conducted to detect the presence of intermediate
antigens in the brains of animals infected with Herpes simplex
virus. Mice and guinea pigs were used. The animals were in-
fected intracerebrally with a 10% virus-containing suspenion
of the brain of white mice in quantities of 0.03 ml for mice
and 0.1 ml for guinea pigs. The animals were immunized with
extracts obtained by centrifuging a 10-30% suspension of the
brains of the infected animals in physiological solution.
Immunized sera obtained from the animals were processed to remove
1/2

- 87 -

CIRC ACCESSION NO--AP0119598

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STATISTICAL EVALUATION WAS MADE
OF THE RESULTS OBTAINED IN THE FIELD AND UNDER ACCELERATED LAB. AGING
CONDITIONS. IN BOTH CASES THE LOSS OF SURFACE BRIGHTNESS WAS MEASURED
AS A FUNCTION OF TIME. THE EQUIV. EXPOSURE TIMES IN THE FIELD (TAU) AND
IN THE LAB. (TAU SUBO) STATISTICALLY OBEY THE RELATION TAU EQUALS ALPHA
TAU SUBO PRIMEB. THE COEFFS. A AND B WERE DETD. FOR SEVERAL SOVIET
ENAMELS.

UNCLASSIFIED

TITLE--STATISTICAL MATHEMATICAL METHOD FOR EVALUATING THE ATMOSPHERIC
   RESISTANCE OF PAINT AND VARNISH COATINGS ACCORDING TO LABORATORY TEST

AUTHOR-(02)-ADLERBERG, M.M., KARYAKINA, M.I.

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USSR

RATNER, A. I., ADLER, Yu. P.

"Some Transforms of Coordinates on Composition-Property Diagrams"

Translation: The use of experimental planning to describe areas of composition-property diagrams frequently leads to the production of models in which the variables are "pseudocomponents." Upon completion of the investigation, a transition frequently must be made to the basic system of coordinates. The purpose of this work is to show the possibility of this transition to a basic system of coordinates which retains the form of the model invariant.

1/1

USSR

CHEMLEVA, T. A., ADLER, Yu. P.

"Decision Making in Informalized Stages of Planning of Experiments in
Studies of Composition-Property Diagrams"

Translation: Methods of experimental planning are ever more widely included
in the practice of studies of composition-property diagrams. In the past
10 years, large numbers of plans have been suggested for various tasks.
In developing each new specific assignment, a decision must be made con-
cerning the selection of some definite, most suitable and efficient plan for
realization of the task at hand as an experiment. This work studies problems
related to making this selection.

1/1

USSR   UDC: 620.193.4

..., N. A., ZHUK, N. P., TIMONOVRANA, A. V., ADLER, Yu. P., ..., A. I., Moscow Institute of Steels and Alloys

"Corrosion Resistance of Aluminum in the Ternary Mixture: Acetic Acid - Formic Acid - Water"

Moscow, Zashchita Metallov, Vol. 6, no. 4, Jul-Aug 70, pp ...

Abstract: The high corrosion resistance of aluminum in acetic acid, its cost and good technological properties were the determining factors in selecting aluminum as the test object. The study involved A97, A5, and ... aluminum grades, all differing in purity. Use was made of Scheffe's method of mathematical planning involving composition-property diagrams to obtain data for deriving equations of the relationship between the reaction rate of corrosion and the composition of the three-component mixture acetic acid-formic acid-water at temperatures of 22, 50, 70, and 90°C. Lines of equal corrosion rates in concentration triangles of the mixture were constructed for the tested aluminum grades and temperatures. The plotted equal corrosion rate lines in the concentration triangles demonstrate areas of various corrosion resistance and, consequently, areas of potential application of the tested aluminum grades in the ternary mixture.
1/1